

IN THE CLAIMS:

The following is a complete listing of claims in this application.

1. (previously presented) A surface treating method of a titanium part, comprising the steps of:

determining an effective thickness of a hard oxide film to be formed on a surface of the titanium part;

determining an effective surface roughness of the hard oxide film; and

oxidation treating the surface of the titanium part under a desired treating temperature and a desired treating time such that both of the determined effective thickness and effective surface roughness are satisfied,

wherein the effective thickness is 14 micrometers or less, and the effective surface roughness R_z is 3.0 micrometers or less,

wherein the effective thickness of the film corresponds to a required hardness and is determined from a correlation of the hardness against the film thickness of the hard oxide film.

Claim 2 (canceled).

3. (previously presented) A method as defined in claim 1, wherein the effective surface roughness of the film corresponds to the required hardness and is determined from a correlation of the hardness against the surface roughness of the hard oxide film.

Claim 4 (canceled).

5. (original) A method as defined in claim 1, wherein the desired treating temperature is 730 degrees C or less.

6. (previously presented) A method as defined in claim 1 further comprising the step of treating the surface of the titanium part after the oxidation treating step.

Claims 7-8 (canceled).

9. (new) A surface treating method of a titanium part, comprising the steps of:

 determining an effective thickness of a hard oxide film to be formed on a surface of the titanium part;

 determining an effective surface roughness of the hard oxide film; and

 oxidation treating the surface of the titanium part under a desired treating temperature and a desired treating time such that both of the determined effective thickness and effective surface roughness are satisfied,

 wherein the effective thickness is 14 micrometers or less, and

 wherein the effective thickness of the film corresponds to a required hardness and is determined from a correlation of the hardness against the film thickness of the hard oxide film.